

Chemicals used for treatment of water intended for human consumption - Silver salts for intermittent use

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 15030:2012+A1:2015 sisaldab Euroopa standardi EN 15030:2012+A1:2015 ingliskeelset teksti.	This Estonian standard EVS-EN 15030:2012+A1:2015 consists of the English text of the European standard EN 15030:2012+A1:2015.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 18.03.2015.	Date of Availability of the European standard is 18.03.2015.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 71.100.80

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:

Aru 10, 10317 Tallinn, Eesti; koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Aru 10, 10317 Tallinn, Estonia; homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

English Version

**Chemicals used for treatment of water intended for human
consumption - Silver salts for intermittent use**

Produits chimiques utilisés pour le traitement de l'eau
destinée à la consommation humaine - Sels d'argent pour
usage intermittent

Produkte zur Aufbereitung von Wasser für den
menschlichen Gebrauch - Silbersalze für den nicht
systematischen Gebrauch

This European Standard was approved by CEN on 23 September 2012 and includes Amendment 1 approved by CEN on 5 January 2015.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword.....	3
Introduction	4
1 Scope	5
2 Normative references	5
3 Description	6
4 Purity criteria.....	9
5 Test methods.....	10
6 Labelling - transportation - storage	13
Annex A (informative) General information on silver salts	16
Annex B (normative) General rules relating to safety.....	18
Annex C (informative) Environmental, health and safety precautions within the chemical laboratory	19
Bibliography.....	20

Foreword

This document (EN 15030:2012+A1:2015) has been prepared by Technical Committee CEN/TC 164 "Water supply", the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2015, and conflicting national standards shall be withdrawn at the latest by September 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes A1 EN 15030:2012 A1.

This document includes Amendment 1 approved by CEN on 2015-01-04.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.

The significant technical differences between this edition and EN 15030:2006 are as follows:

- Modification of 6.2 on labelling, deletion of the reference to EU Directive 80/778/EEC of 15 July 1980 in order to take account of the latest Directive in force.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

In respect of potential adverse effects on the quality of water intended for human consumption caused by the products covered by this European Standard:

- a) this European Standard provides no information as to whether the products may be used without restriction in any of the Member States of the EU or EFTA;
- b) it should be noted that, while awaiting the adoption of verifiable European criteria, existing national regulations concerning the use and/or the characteristics of these products remain in force.

NOTE 1 Conformity with this European Standard does not confer or imply acceptance or approval of the products in any of the member states of the EU or EFTA. The use of the products covered by this European Standard is subject to regulation or control by national authorities.

NOTE 2 These products are used as biocides and comply with the relevant legislation in force. In the European Union, at the time of publication, this legislation is Regulation (EU) No 528/2012 [1].

Water which is to be preserved with silver ions should fulfil the relevant legal requirements before the silver salt is added, in particular microbiological requirements.

1 Scope

This European Standard is applicable to silver nitrate and silver sulfate [A] and silver chloride [A] for the preservation of water intended for human consumption in intermittent applications in:

- water supply plants, including their pipeline networks (small-size plants);
- water for the preparation of foodstuffs;
- water which is stored in packaged form or kept in enclosed systems (for example, water supply systems in land, water and airborne vehicles).

The purpose of adding silver salts is to prevent the detrimental proliferation of microorganisms in water during storage or in enclosed supply systems.

This European Standard describes the characteristics of silver salts, specifies the requirements for silver salts and gives reference to the analytical methods. It gives information on their use in water treatment. It also determines the rules relating to safe handling and use of silver salts (see Annex B).

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1233, *Water quality — Determination of chromium — Atomic absorption spectrometric methods*

EN ISO 3696, *Water for analytical laboratory use — Specification and test methods (ISO 3696)*

EN ISO 5961, *Water quality — Determination of cadmium by atomic absorption spectrometry (ISO 5961)*

EN ISO 10304-1, *Water quality — Determination of dissolved anions by liquid chromatography of ions — Part 1: Determination of bromide, chloride, fluoride, nitrate, nitrite, phosphate and sulphate (ISO 10304-1)*

EN ISO 11885, *Water quality — Determination of selected elements by inductively coupled plasma optical emission spectrometry (ICP-OES) (ISO 11885)*

EN ISO 11969, *Water quality — Determination of arsenic — Atomic absorption spectrometric method (hydride technique) (ISO 11969)*

EN ISO 12846, *Water quality — Determination of mercury — Method using atomic absorption spectrometry (AAS) with and without enrichment (ISO 12846)*

ISO 3165, *Sampling of chemical products for industrial use — Safety in sampling*

ISO 6206, *Chemical products for industrial use — Sampling — Vocabulary*

ISO 8213, *Chemical products for industrial use — Sampling techniques — Solid chemical products in the form of particles varying from powders to coarse lumps*

ISO 8288:1986, *Water quality — Determination of cobalt, nickel, copper, zinc, cadmium and lead — Flame atomic absorption spectrometric methods*

ISO 9965, *Water quality — Determination of selenium — Atomic absorption spectrometric method (hydride technique)*

3 Description

3.1 Identification

3.1.1 Chemical name

- a) Silver nitrate;
- b) Silver sulfate;

ⓘ

- c) silver chloride. ⓘ

3.1.2 Synonym or common name

ⓘ The naturally occurring mineral is called *chlorargyrite* or *cerargirite*, if weathered by air named as *horn silver*. ⓘ

3.1.3 Relative molecular mass

- a) 169,87;
- b) 311,97;

ⓘ

- c) 143,23. ⓘ

3.1.4 Empirical formula

- a) AgNO_3 ;
- b) Ag_2SO_4 ;

ⓘ

- c) AgCl . ⓘ

3.1.5 Chemical formula

- a) AgNO_3 ;
- b) Ag_2SO_4 ;

ⓘ

- c) AgCl . ⓘ